Edmonton Area Series Report No. 69

1990 ALL ALBERTA STUDY
(Including The Edmonton Area Study)

SAMPLING REPORT

by

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INTRODUCTION

The 1990 All Alberta Study (AAS) was the fourth annual survey administered by the Department of Sociology, University of Alberta, through its research facility, the Population Research Laboratory (PRL). This random sample survey of households in the province of Alberta has enabled academic researchers, local community agencies, and government departments to explore a broad spectrum of social issues in an on-going research framework in Alberta.

This report describes the sampling design, data collection methods, and weighting technique used in the 1990 All Alberta Study. Also, a brief demographic profile of the sample and a description of the data collection statistics are presented. Subsequent papers on findings from the 1990 AAS will be announced in the PRL's "In Summary" newsletter.

SAMPLING DESIGN

Main features of the sampling design are as follows:

1. Province of Alberta delineated into three areas.

    a. City of Edmonton for face-to-face interviewing.
    b. City of Calgary for telephone interviewing.
    c. Remainder of the Province for telephone interviewing (Other Alberta).

2. Two-stage selection process.

    a. Selection of households.
    b. Selection of respondent within each household.

To retain the comparability of the Edmonton face-to-face sample with past Edmonton Area Studies (EAS), a sample size of 400 or more was deemed necessary. This would also permit Edmonton to be analyzed as a separate entity. On the other hand, the sample sizes for Calgary and Other Alberta were primarily determined by budgetary constraints. However, at the same time a minimum sample size was sought to permit separate analysis for these two areas.

Face-To-Face Sampling - Edmonton

The 1990 Edmonton population universe was designated as all persons 18 years of age or older who at the time of the survey were living in a dwelling unit that was enumerated during the City of Edmonton Civic Census in the spring of 1989.

As in previous Edmonton Area Studies, the sampling frame consisted of a computerized list of addresses compiled by the City of Edmonton from their most current enumeration (1989). From the computer tape, a simple random sample of 620 addresses was selected for personal interviewing. Nursing homes, military and temporary residences were deleted from the sample. Within the household, one eligible person was selected as the respondent for the one hour interview.

Interviewers were instructed to obtain an equal number of male and female respondents within their allotment of interviews. As adult males are generally more difficult to contact, the following selection procedure guidelines were set for the interviewers to assist them in obtaining their quotas.

a. The dwelling unit must be the person's usual place of residence and he/she must be 18 years of age or older.

b. If an adult male answers the door and is willing to be interviewed, he is the respondent.

c. If an adult female answers the door and there is an adult male present who is willing to be interviewed, interview the male. If the male is not willing to be interviewed, and the female is willing, interview the female.[1]

d. If an adult female answers the door and there is no adult male present, choose her as the respondent.

The final breakdown of the EAS sample by gender of respondent, using the above procedures, was 49.6% male and 50.4% female.

Telephone Sampling - Calgary and Other Alberta[2]

The population universe designated for telephone interviewing was all persons 18 years of age or older who, at the time of the survey, were living in a dwelling unit in Alberta outside of the City of Edmonton that could be contacted by direct-dialing. From this population, two samples were drawn to cover the area: the first one represented the City of Calgary, and the second represented the remainder of the region.

For the past four studies, the PRL has developed computer files of working five-digit telephone banks covering the whole of Alberta. The samples of telephone numbers for Calgary and Other Alberta were generated from these files by selecting, with replacement, a simple random sample of banks for each area and appending a random number between 00 and 99 to each number selected. All duplicate numbers were discarded.

As with the face-to-face interviewers, the telephone interviewers were given instructions to obtain an equal number of male and female respondents. Again, as adult males are generally more difficult to contact, the selection procedure guidelines were exactly the same as they were with the face-to-face interviewing.

The final breakdown of the telephone samples by gender of the respondent, using the above procedures, was 51.0% male and 49.0% female for Other Alberta and 50.4% male and 49.6% female for Calgary.

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1 Sixty percent of the first eligible persons encountered were female. In households where a completed interview was obtained, 88% of the first eligible persons accepted.

2 Remainder of the Province, excluding Edmonton and Calgary.

THE QUESTIONNAIRES

Two questionnaires were used for the Study, one for the face-to-face component and one for the telephone component. All the telephone questions (modified slightly for suitable administration over the telephone) were taken from the face-to-face instrument, which was about twice the length of the telephone questionnaire. No response categories or scales were altered.

The questionnaires contained a wide variety of questions reflecting the specific research interests of the University researchers and outside agencies participating in the Study. However, as in previous years, there was a special topic, in this case, "Health in Alberta." A few questions are replications from previous questionnaires (see the Appendix for a complete listing of all the areas covered). The questionnaires were pretested on a total of sixty-seven Edmonton householders, and necessary modifications were made before actual interviewing began. All questions were submitted to a University Ethics Committee to ensure suitability for administration to the general public.

DATA COLLECTION

Face-To-Face Data Collection - Edmonton

A total of 35 trained interviewers from the PRL interviewing pool conducted the interviews which began February 10th. In the week prior to the commencement of the fieldwork, an introductory letter was sent to each selected address. It briefly described the nature of the study and advised the residents of the household that an interviewer would be visiting in the near future.

If the interviewers were unsuccessful in establishing contact on their first visit, they were to make four callback attempts before declaring an address as "no contact." At the outset of the interview the interviewer advised the respondents that their participation was voluntary, their responses would be kept completely confidential and they could stop the interview at any time.

Data collection took six weeks with 60% of the interviewing being completed during the first two weeks. Tuesday had the highest number of completions while Friday had the fewest completions. The average interviewer completed 13 interviews. Twenty-five addresses were found to be ineligible, vacant or demolished buildings. Deletion of these addresses represented corrections to the sampling frame rather than non-response addresses.

Thirty-eight percent of the completed interviews were verified through a series of telephone checks and home visits where necessary. No significant discrepancies or irregularities were found.

Telephone Data Collection - Calgary And Other Alberta

The telephone interviewing began February 12th and was completed by the middle of March. A total of twelve interviewers completed the interviewing.

If the interviewers were unsuccessful in establishing contact on their first call, they were to make ten callback attempts before declaring a telephone number as "no contact." Upon making contact, the interviewer identified herself, verified the telephone number, and then asked the screening questions for selecting the respondent. Before administering the questionnaire the interviewer advised the respondents that their participation was voluntary, their responses would be kept completely confidential and they could stop the interview at any time.

The telephone data collection took six weeks, with 46% of the interviewing being completed during the first two weeks. The average telephone interviewer completed 66 interviews. Twenty-one percent of the completed interviews were verified by re-contacting the respondent. No significant discrepancies or irregularities were found.

Figure 1 shows the percentage of the interviews obtained according to the number of callbacks. With the Other Alberta telephone sample 26% of the interviews were obtained on the initial call while with the Calgary telephone sample 20% were obtained. Twenty-six percent of the Edmonton face-to-face interviews were obtained on the initial visit.

Table 1 shows additional data collection statistics for the three samples.

TABLE 1

DATA COLLECTION SUMMARY

PARAMETERS	OTHER ALBERTA	CALGARY	EDMONTON
1st contact interviews	26%	20%	26%
Before 6 p.m. weekdays interviews	39%	48%	38%
Monday to Friday interviews	67%	74%	75%
Without appointment interviews	65%	61%	51%
Response rates	80%	75%	75%
Median interviewing time (minutes)	32	30	57
Sample size	396	401	448

Table 2 shows the breakdown of the initial sample selections.

TABLE 2

BREAKDOWN DISPOSITIONS OF ORIGINAL SAMPLES

	OTHER ALTA	CAL	EDM	OTHER ALTA	CAL	EDM
	ACTUAL			%	%	%
ORIGINAL SAMPLE DRAWN	957	940	620	100.0	100.0	100.0
Deduct:						
non-residential/ ineligible	158	184	2	16.5	19.6	0.3
not in service/ vacant/demol.	297	224	23	31.0	23.8	3.7
2nd residence	4			0.4		
CORRECTED SAMPLE	498	532	595	52.1	56.6	96.0
BREAKDOWN OF CORRECTED OF SAMPLE						
completed interviews	396	401	448	79.5	75.4	75.3
incomplete interviews	6	4		1.2	.8	0.0
no answer/contact	26	35	28	5.2	6.6	4.7
refused	63	82	108	12.7	15.4	18.2
language problem	1	10	6	0.2	1.9	1.0
illness	6		5	1.2	0.0	0.8
TOTAL	498	532	595	100.0	100.1	100.0

Figure 2 shows that the response rates for the three samples for the past three years have been fairly uniform. The highest response was achieved with the 1988 Other Alberta sample (80.2%). The 1990 response rate for Other Alberta was 79.5%, for Calgary 75.4% and for Edmonton 75.3%.

Figure 3 in a 100% or "normalized" chart shows for 1990 the proportion of the non-response categories and completed interviews to the whole eligible sample for each area. Other Alberta had the lowest refusal rate at 15.3% while Edmonton had the highest at 20.0%. The Calgary sample refusal rate was 18.1%.

CALCULATION OF WEIGHTS

The final sample obtained for each area is not proportional to the Alberta population it represents. For instance, Edmonton is over-sampled. Edmonton makes up only 25% of the Alberta population but has 36% of the interviews. Therefore, in order to combine the samples for a provincial sample, weighting was necessary.[3] The following table contains the information used to calculate the weights.

TABLE 3

CALCULATION OF WEIGHTS

SAMPLE AREA	1986 POP. 20+ YEARS	PERCENT OF POP.	SAMPLE SIZE	PERCENT OF SAMP.	WEIGHT FACTOR	WEIGHTED SAMPLE
Edmonton	413,530	25.4903%	448	35.9839%	.708379	317
Calgary	454,805	28.0345	401	32.2088	.870398	349
Other Alberta	753,970	46.4752	396	31.8072	1.461153	579
TOTAL	1,622,305	100.0000%	1245	99.9999%		1245

DATA

The raw data file exists in 80 column card image format and is stored on magnetic tape. The data were tabulated and cleaned in accordance with generally accepted survey research practices using OSIRIS and SPSSx statistical packages, and special programs developed by the PRL. The rectangular data set contains 390 variables for each case. There are a total of 1245 cases with 9 decks per case. A SPSSx systems file with labels has been created to analyze

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3 If the samples are analyzed individually, then no weighting is necessary; for example, if the researcher is only interested in the Edmonton responses. In the SPSSx systems file the weighting variable is: WT. By default the weighting is on and is turned off with the procedure command: WEIGHT OFF. To turn weighting back on insert: WEIGHT BY WT.

the data. In tabulating the data, the two questionnaires were coded in exactly the same manner to permit merging of the data without adjustments.

Access to the data has been restricted (until January 1, 1991) to agencies and persons participating in the survey.

DEMOGRAPHIC PROFILE

Table 4 presents some of the major demographic characteristics of the three sample areas.

TABLE 4

DEMOGRAPHIC PROFILE OF THE 1990 RESPONDENTS

CHARACTERISTICS	OTHER ALBERTA	CALGARY	EDMONTON
	%	%	%
RELIGION			
Protestant	64	55	51
Roman Catholic & Other Catholic	25	22	28
Other	1	5	4
No religion	11	19	17
EDUCATION (years of schooling)			
less than 12 years	29	15	22
12-15 years	53	56	51
16+ years	18	30	27
DWELLING UNIT			
single-detached house	76	62	57
multiple family apartments	9	21	26
row/townhouse	2	8	14
semi-detached/duplex	5	8	3
other types	8	1	0
EMPLOYMENT STATUS			
full-time	54	57	57
part-time	11	11	11
other (e.g. keeping house etc.)	35	32	33
HOME OWNERSHIP			
own	75	64	53
rent	25	36	47
MEDIAN AGE IN YEARS	41	35	35

Household and individual income distributions for the three sample areas for the past three years (1988 to 1990) are presented in Figure 4. For 1990 Calgary had the highest household income at $49,667 while Edmonton had the lowest at $35,692. Other Alberta household income was $45,000. With respect to individual income Calgary had the highest at $24,583 while Edmonton had the lowest at $21,875. Other Alberta individual income was $22,750.

SAMPLE REPRESENTATIVENESS

The 1990 AAS age distributions and marital status distributions are compared to the most current Statistics Canada data in Tables 5 and 6 respectively. The 1990 EAS age distributions are compared to the 1989 City of Edmonton Civic Census age distributions in Table 7. The indexes of dissimilarity[4] for each Table demonstrate that the samples adequately reflect their populations.

TABLE 5

AGE DISTRIBUTIONS FOR ALBERTA AND AAS

AGE GROUPS	POSTCENSAL ALBERTA 1989[5]	AAS 1990
	%	%
20-29	26.0	22.9
30-39	26.5	30.6
40-49	17.6	19.4
50-59	12.1	12.3
60+	17.9	14.8
	100.1	100.0
Index of Dissimilarity: 6.2		

4 The index represents the proportion of households that would have to move to a different category to make the distributions identical. The index can vary from 0 to 100. Any index less than 10 indicates that the distributions are similar. Source: Duncan, O.D., and Duncan, B. "Residential Distribution and Occupational Stratification." American Journal of Sociology, 60(5):493, March 1955.

5 Statistics Canada. "Postcensal Annual Estimates of Population by Marital Status, Age, Sex and Components of Growth for Canada, Provinces and Territories, June 1, 1989," Catalogue 91-210. Ottawa.

TABLE 6

ALBERTA AND AAS MARITAL STATUS DISTRIBUTIONS FOR RESPONDENTS 20 YEARS OF AGE OR OLDER

MARITAL STATUS	POSTCENSAL ALBERTA 1989[6]	AAS 1990
SINGLE	19.3%	16.2%
MARRIED*	69.1	71.3
DIVORCED	6.0	7.4
WIDOWED	5.6	5.2
	100.0%	100.1%
Index of Dissimilarity: 3.6		

*Includes persons now married, separated (legally or otherwise but not divorced) and persons living in common-law unions.

TABLE 7

AGE DISTRIBUTIONS FOR EDMONTON AND EAS

AGE GROUPS	EDMONTON 1989[7]	EAS 1990
20-29	29.5%	28.2%
30-39	25.6	31.4
40-49	15.6	17.3
50-59	11.9	10.2
60+	17.5	13.0
	100.1	100.1
Index of Dissimilarity: 7.5		

6 Ibid.

7 Edmonton Demographic Indicators, 1989. City of Edmonton, April, 1990.

TIME SHARING ON AAS & EAS

Those persons and organizations who are interested in submitting questions for the 1991 project on a time-sharing basis should contact the Director of the PRL before the end of September (1990). The Study's schedule will be as follows:

4th week of September	-deadline for question submission
2nd week of November	- pretest questionnaire finalized
3rd week of November	- pretest
3rd week of December	- questionnaire finalized
1st week of February	- interviewer training
February and March	- data collection
April and May	- coding, data entry, and data cleaning
June 30th	- data ready for analysis

FIGURE 1

CALL BACKS TO OBTAIN INTERVIEW

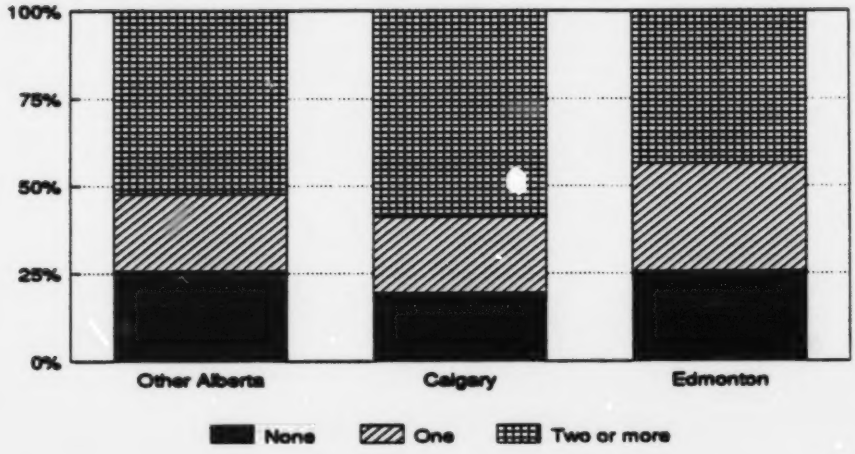


FIGURE 2

RESPONSE RATES

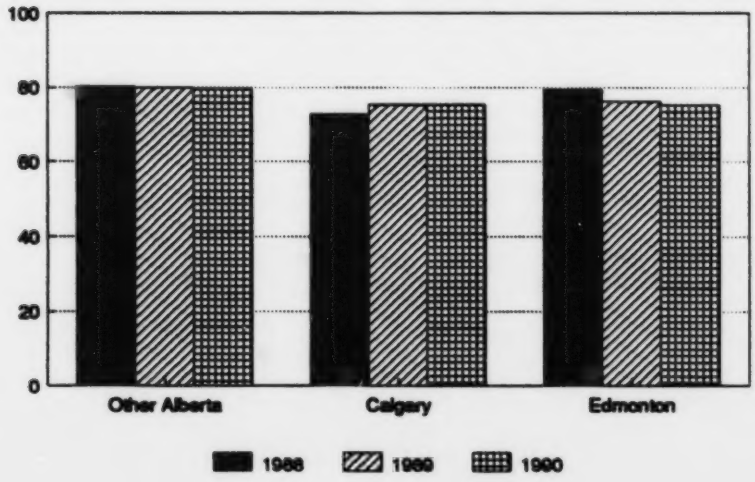
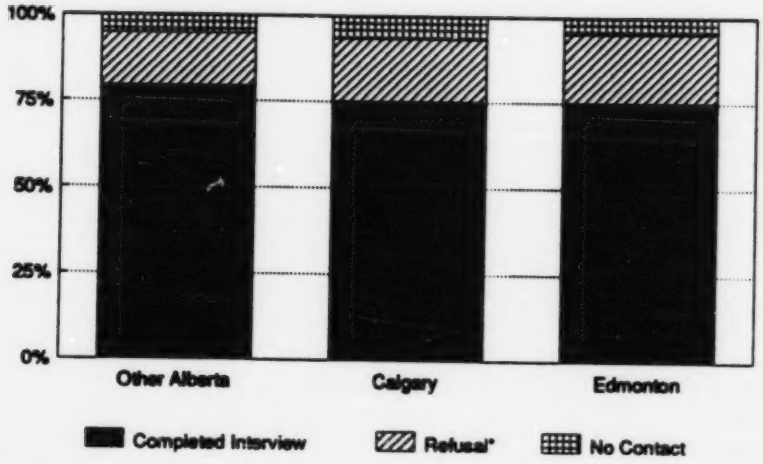


FIGURE 3

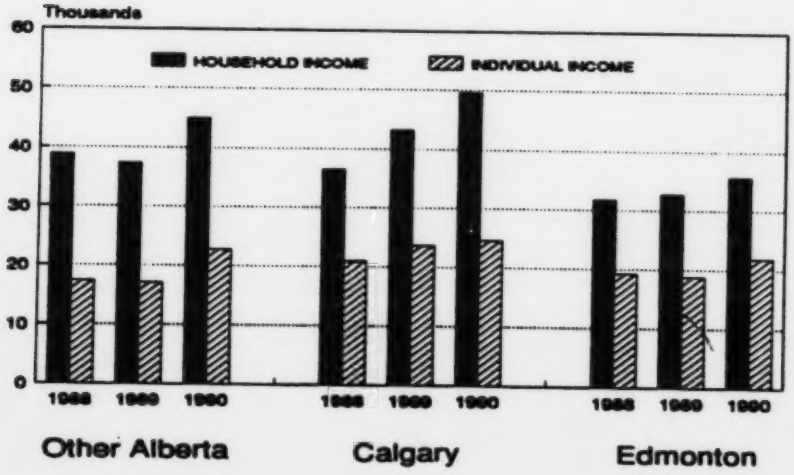
SAMPLE RESPONSE BREAKDOWN



Includes: Language Problems and Illness

FIGURE 4

MEDIAN INCOME LEVELS



APPENDIX A

TOPICS INCLUDED IN THE 1990 AAS AND EAS

I. Demographic Characteristics of Population

Household composition, age, gender, marital status, education, income, religion, country of birth, language first learned, mobility, and occupation

II. Health

A. Smoking behaviour/workplace/attitudes
B. Alcohol consumption
C. General health and well-being
D. Care for the elderly
E. Illnesses and attitudes
F. AIDS
    a. Issues
    b. Attitudes
    c. Knowledge
    d. Behaviour

III. Environment

A. Attitudes
B. Recycling
C. Behaviour

IV. Crime and Policing

A. Assessments of policing
B. Criminal justice system
C. Neighbourhood safety

V. Other Topics

A. Alberta issues
B. Seatbelt use
C. Social support
D. Grocery spending
E. Children's programs
F. Political party preference
G. Television viewing
H. Travel